



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

RM

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,043	06/22/2001	Marco Nassi	05788.0165	5444

22852 7590 09/04/2003

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP  
1300 I STREET, NW  
WASHINGTON, DC 20005

EXAMINER
----------

MAYO III, WILLIAM H

ART UNIT	PAPER NUMBER
----------	--------------

2831

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/886,043

Applicant(s)

NASSI ET AL.

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 11-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☒ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, claims 1-10 in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in PCT Application No. PCT/EP99/10442, filed on December 22, 1999.

### ***Information Disclosure Statement***

3. The information disclosure statement filed June 22, 2001 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

### ***Drawings***

4. The drawings are objected to because Figure 1 lacks the proper cross-hatching which indicates the type of materials, which may be in an invention. Specifically, the cross hatching to indicate the conductor and insulation materials is improper. The

applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

5. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

### ***Specification***

6. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

#### **Content of Specification**

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Art Unit: 2831

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly

Art Unit: 2831

complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

7. The disclosure is objected to because of the following informalities: The specification lacks the proper headings as disclosed above. The applicant should insert the headings as disclosed above to provide the specification with clarity.

Appropriate correction is required.

### ***Claim Objections***

8. Claims 1-10 is objected to because of the following informalities: Throughout the claims, the applicant states the terms "the said", which is improper. Examples of such

Art Unit: 2831

are located in claim 1, lines 3 & 9. The applicant should delete one of the terms "the" or "said". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 1 recites the limitation "connecting lines between the said nodes" in lines 2-3 and "a coaxial superconducting cable being connected between two nodes", in lines 5-7, which is confusing and renders the claim indefinite. It is unclear whether the applicant is referring the connecting lines are superconducting cables or if the applicant is stating that both are connected between the nodes. The applicant should make the terms more distinguishable if they are different.

12. Claim 6 recites the limitation "the said at least one inductance" in line 2, which is confusing and renders the claim indefinite. It is unclear whether the applicant is referring to the previous mentioned "at least one inductive element" or introducing a new inductance. If the applicant is referring to the previous mentioned term, then he/she should recite the term with consistency. If the applicant is referring to a new inductance, then he/she should make the term more distinguishable.

Art Unit: 2831

13. Claim 7 recites the limitation "the multiple phase type" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim because there has not been any previous reference to a multiple phase type in previous lines of the claims.

14. Claim 8 recites the limitation "it comprises" in lines 1-2. It is unclear exactly what it is. Is "it" the network.

15. Claims 2-5 and 9-10 are depended upon rejected claim 1 and therefore are rejected.

***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 1-6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Collet et al (Pat Num 4,910,626, herein referred to as Collet). Collet discloses an electrical power transmission network (Figs 1-4) comprising a current limiter (abstract). Specifically, with respect to claim 1, Collet discloses an electrical power transmission network (Fig 1) comprising an interconnecting nodes (top of cables 5a & 5b and Q) coaxial superconductor cable connecting lines (5a & 5b), having a first reactance is connected between the nodes (tops of cables 5a & 5b and Q) of the network (Fig 1), wherein at least one inductive element (i.e. coiled 7 & 8) having a second reactance is connected in series with the coaxial superconducting cables (5a & 5b). With respect to



Art Unit: 2831

claim 2, Collet discloses all of the claimed structure and therefore inherently discloses that the sum of the first reactance and the second reactance is substantially equal to a third reactance whose value is substantially equal to the reactance of a conventional cable suitable for connection. With respect to claim 3, Collet discloses that the inductive element (7 & 8) is a superconducting cable (Col 2, lines 60-64). With respect to claim 4, Collet discloses that the at least one inductive element (7 & 8) comprises a core (14 & 15). With respect to claim 5, Collet discloses that the at least one inductive element (7 & 8) is located at one end (at Q) of the coaxial superconducting cable (5a & 5b). With respect to claim 6, Collet discloses that the at least one inductive element (7 & 8) comprising two parts (top and bottom 7 & 8), wherein one part is located at one end (top portion located at Q) of the superconducting cable (5a & 5b) and the other end (bottom 7 & 8) is located at the opposite end (bottom end). With respect to claim 9, Collet discloses that the superconducting cable (5a & 5b) comprises a support of conducting material (30a & b, 31a & b, Col 2, lines 51-56).

### ***Claim Rejections - 35 USC § 103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 2831

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

20. Claims 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collet (Pat Num 4,910,626) in Metra (EP 0 780 926 A1). Collet discloses an electrical power transmission network (Figs 1-4) comprising a current limiter (abstract). Specifically, with respect to claim 7, Collet discloses two superconducting cables (5a & 5b). With respect to claim 8, Collet discloses that the at least one inductive element (7 & 8) are connected in series with each superconducting cable (5a & 5b). With respect to claim 10, Collet discloses that the coaxial superconducting cable (5a & 5b) comprises a support (30a & b, 31a & b).

However, Collet doesn't necessarily disclose the coaxial superconducting cable being a multiple phase type (claim 7), nor the support being composite material (claim 10).

Metra teaches an electrical power transmission network (Figs 1-8) comprising a terminal for connecting a superconducting cable multiphase cable (Fig 4) for the purpose of eliminating the magnetic field external of the cable end and as a result, losses due to the induced currents, and minimizing the magnetic field present in the superconductors, maximizing the performance of the same (Page 3, lines 5-10).

Art Unit: 2831

Specifically, with respect to claim 7, Metra discloses that the coaxial superconducting cable (Fig 4) comprising a multiple phase type (i.e. three phase, Page 4, lines 23-25).

With respect to claim 10, Metra discloses that the superconducting cable (Fig 1) comprises superconductors (2) which comprise casing (i.e. supports) that are made of composite materials (Page 4, lines 42-46).

With respect to claims 7 & 10, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the superconductor of Collet to comprise the conductor and support configuration as taught by Metra because Metra teaches that such a configuration provides a means for eliminating the magnetic field external of the cable end and as a result, losses due to the induced currents, and minimizing the magnetic field present in the superconductors, maximizing the performance of the same (Page 3, lines 5-10).

### ***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Saha et al (Pat Num 6,529,010), Massar (Pat Num 4,015,168), Onishi et al (Pat Num 5,475,560), Ries (Pat Num 6,005,194), Kullmann et al (Pat Num 3,728,463), Engelhardt et al (Pat Num 6,262,375), and Metra (Pat Num 6,049,036), all of which discloses superconducting cables.

Art Unit: 2831

***Communication***

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'William H. Mayo III', written over a horizontal line.

WHM III  
August 24, 2003